

**Notice of Allowability**

Application No.

09/447,052

Applicant(s)

SUEHIRA, SEISHI

Examiner

Art Unit

Chau Nguyen

2176

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/02/2007.
2. ☒ The allowed claim(s) is/are 1-63.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 10/25/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 05/16/2007.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



**Doug Hutton**  
**Primary Examiner**

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael P. Stanley (Applicant's representative), registration #58,523, on 05/16/2007.

The application has been amended as follows:

1. (PREVIOUSLY PRESENTED) A hub document preparation method, for use in a computer system having a file system to manage data by storing the data in a file-system directory, for preparing a hub document which describes entity declarations for referring to entities of documents individually corresponding to a plurality of non-structured documents in order to prepare a single hub document format structured document from the plurality of non-structured documents, the method comprising:

setting in advance one original document file-system directory for storing the plurality of non-structured documents and one structured document file-system directory for storing a plurality of structured documents obtained by conversion of the plurality of non-structured documents;

storing, each time one of the plurality of non-structured documents to be included in the hub document format structured document is prepared or edited, the one of the plurality of non-structured document into the original document file-system directory;

converting the plurality of non-structured documents stored in the original document file-system directory into the plurality of structured documents and storing the plurality of structured documents into the structured document file-system directory;

determining whether each of the plurality of structured documents is present in the structured document file-system directory; and

in response to the presence of each of the plurality of structured documents in the structured document file-system directory, automatically adding the entity declarations to the hub document by acquiring document names of each of the plurality of structured documents stored in the structured document file-system directory and preparing corresponding entity declarations referring to each of the plurality of structured documents stored in the structured document file-system directory.

2. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 1, wherein, in addition to the original document file-system directory and the structured document file-system directory, an attachment file file-system directory for storing attachment files attached to the non-structured documents and entity declarations regarding the attachment files is set in advance, and, upon preparation or editing of any of the plurality of structured documents to be included in the hub document format structured document, if an attachment file is attached to the non-

structured document, then the attachment file is stored into the attachment file file-system directory and an entity declaration for referring to an entity of the attachment file is prepared and stored into the attachment file file-system directory, and then the entity declarations regarding the attachment files stored in the attachment file file-system directory are extracted and the hub document is prepared based on the entity declarations regarding the attachment files and the entity declarations regarding the structured documents.

3. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 1, wherein, in addition to the original document file-system directory and the structured document file-system directory, an attachment file file-system directory for storing attachment files attached to the non-structured documents and an entity declaration file-system directory for storing entity declarations regarding the attachment files are set in advance, and, upon preparation or editing of any of the plurality of non-structured documents to be included in the hub document format structured document, if an attachment file is attached to the non-structured document, then the attachment file is stored into the attachment file file-system directory and an entity declaration for referring to an entity of the attachment file is prepared and stored into the attachment file file-system directory, and then the entity declarations regarding the attachment files stored in the entity declaration file-system directory are extracted and the hub document is prepared based on the entity declarations regarding the attachment files and the entity declarations regarding the structured documents.

4. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 1, wherein the entity declarations of the structured documents have file names corresponding to file names of the original non-structured documents individually corresponding to the structured documents.

5. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 2, wherein the entity declarations of the structured documents have file names corresponding to file names of the original non-structured documents individually corresponding to the structured documents.

6. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 3, wherein the entity declarations of the structured documents have file names corresponding to file names of the original non-structured documents individually corresponding to the structured documents.

7. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 1, wherein the entity declarations regarding the attachment files stored in the entity declaration file-system directory have file names corresponding to file names of the non-structured documents to which the attachment files are attached.

8. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in

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claim 2, wherein the entity declarations regarding the attachment files stored in the entity declaration file-system directory have file names corresponding to file names of the non-structured documents to which the attachment files are attached.

9. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 3, wherein the entity declarations regarding the attachment files stored in the entity declaration file-system directory have file names corresponding to file names of the non-structured documents to which the attachment files are attached.

10. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 4, wherein the entity declarations regarding the attachment files stored in the entity declaration file-system directory have file names corresponding to file names of the non-structured documents to which the attachment files are attached.

11. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 5, wherein the entity declarations regarding the attachment files stored in the entity declaration file-system directory have file names corresponding to file names of the non-structured documents to which the attachment files are attached.

12. (PREVIOUSLY PRESENTED) A hub document preparation method as claimed in claim 6, wherein the entity declarations regarding the attachment files stored in the

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entity declaration file-system directory have file names corresponding to file names of the non-structured documents to which the attachment files are attached.

13. (ORIGINAL) A hub document preparation method as claimed in claim 1, wherein the attachment files are graphic files each of which includes graphic information.

14. (ORIGINAL) A hub document preparation method as claimed in claim 2, whereto the attachment files are graphic files each of which includes graphic information.

15. (ORIGINAL) A hub document preparation method as claimed in claim 3, whereto the attachment files are graphic files each of which includes graphic information.

16. (ORIGINAL) A hub document preparation method as claimed in claim 4, wherein the attachment files are graphic files each of which includes graphic information.

17. (ORIGINAL) A hub document preparation method as claimed in claim 5, wherein the attachment files are graphic files each of which includes graphic information.

18. (ORIGINAL) A hub document preparation method as claimed in claim 6, wherein the attachment files are graphic files each of which includes graphic information.

19. (ORIGINAL) A hub document preparation method as claimed in claim 7, wherein the attachment files are graphic files each of which includes graphic information.

20. (ORIGINAL) A hub document preparation method as claimed in claim 8, wherein the attachment files are graphic files each of which includes graphic information.

21. (ORIGINAL) A hub document preparation method as claimed in claim 9, wherein the attachment files are graphic files each of which includes graphic information.

22. (ORIGINAL) A hub document preparation method as claimed in claim 10, wherein the attachment files are graphic files each of which includes graphic information.

23. (ORIGINAL) A hub document preparation method as claimed in claim 11, wherein the attachment files are graphic files each of which includes graphic information.

24. (ORIGINAL) A hub document preparation method as claimed in claim 12, wherein the attachment files are graphic files each of which includes graphic information.

25. (ORIGINAL) A hub document preparation method as Claimed in claim 1, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

26. (ORIGINAL) A hub document preparation method as claimed in claim 2, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

27. (ORIGINAL) A hub document preparation method as claimed in claim 3, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

28. (ORIGINAL) A hub document preparation method as claimed in claim 4, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

29. (ORIGINAL) A hub document preparation method as claimed in claim 5, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

30. (ORIGINAL) A hub document preparation method as claimed in claim 6, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

31. (ORIGINAL) A hub document preparation method as claimed in claim 7, wherein the

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structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

32. (ORIGINAL) A hub document preparation method as claimed in claim 8, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

33. (ORIGINAL) A hub document preparation method as claimed in claim 9, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

34. (ORIGINAL) A hub document preparation method as claimed in claim 10, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

35. (ORIGINAL) A hub document preparation method as claimed in claim 11, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

36. (ORIGINAL) A hub document preparation method as claimed in claim 12, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

37. (ORIGINAL) A hub document preparation method as claimed in claim 13, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

38. (ORIGINAL) A hub document preparation method as claimed in claim 14, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

39. (ORIGINAL) A hub document preparation method as claimed in claim 15, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

40. (ORIGINAL) A hub document preparation method as claimed in claim 16, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

41. (ORIGINAL) A hub document preparation method as Claimed in claim 17, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

42. (ORIGINAL) A hub document preparation method as claimed in claim 18, wherein

the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

43. (ORIGINAL) A hub document preparation method as claimed in claim 19, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

44. (ORIGINAL) A. hub document preparation method as claimed in claim 20, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

45. (ORIGINAL) A hub document preparation method as claimed in claim 21, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

46. (ORIGINAL) A hub document preparation method as claimed in claim 22, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

47. (ORIGINAL) A hub document preparation method as claimed in claim 23, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

48. (ORIGINAL) A hub document preparation method as claimed in claim 24, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

49. (PREVIOUSLY PRESENTED) A volatile or non-volatile computer-readable storage storing information for a computer to perform a method according to claim 1.

50. (PREVIOUSLY PRESENTED) A volatile or non-volatile computer-readable storage storing information for a computer to perform a method according to claim 2.

51. (PREVIOUSLY PRESENTED) A volatile or non-volatile computer-readable storage storing information for a computer to perform a method according to claim 3.

52. (PREVIOUSLY PRESENTED) A volatile or non-volatile computer-readable storage storing information for a computer to perform a method according to claim 4.

53. (PREVIOUSLY PRESENTED) A volatile or non-volatile computer-readable storage storing information for a computer to perform a method according to claim 7.

54. (PREVIOUSLY PRESENTED) A volatile or non-volatile computer-readable storage storing information for a computer to perform a method according to claim 13.

55. (PREVIOUSLY PRESENTED) A volatile or non-volatile computer-readable storage storing information for a computer to perform a method according to claim 25.

56. (CURRENTLY AMENDED) A hub document preparation apparatus, for use in a computer system having a file system to manage data by storing the data in a file-system directory, for preparing a hub document which describes entity declarations for referring to entities of documents individually corresponding to a plurality of non-structured documents in order to prepare a single hub document format structured document from the plurality of non-structured documents, the apparatus comprising:

one original document file-system directory setting in advance and storing the plurality of non-structured documents and one structured document file-system directory storing a plurality of structured documents obtained by conversion of the plurality of non-structured documents, where each time one of the plurality of non-structured documents to be included in the hub document format structured document is prepared or edited, the one of the plurality of non-structured documents is stored into the original document file-system directory, where the plurality of non-structured documents stored in the original document file-system directory are converted into the plurality of structured documents and the plurality of structured documents are stored into the structured document file-system directory;

a determining unit determining whether each of the plurality of structured documents is present in the structured document file-system directory; and

an entity declarations adding unit, in response to the presence of each of the plurality of structured documents in the structured document file-system directory, automatically adding the entity declarations ~~that are automatically added~~ to the hub document by acquiring document names of each of the plurality of structured documents stored in the structured document file-system directory and preparing corresponding entity declarations referring to each of the plurality of structured documents stored in the structured document file-system directory.

57. (PREVIOUSLY PRESENTED) A hub document preparation apparatus as claimed in claim 56, wherein, in addition to the original document file-system directory and the structured document file-system directory, an attachment file file-system directory for storing attachment files attached to the non-structured documents and entity declarations regarding the attachment files is set in advance, and, upon preparation or editing of any of the plurality of structured documents to be included in the hub document format structured document, if an attachment file is attached to the non-structured document, then the attachment file is stored into the attachment file file-system directory and an entity declaration for referring to an entity of the attachment file is prepared and stored into the attachment file file-system directory, and then the entity declarations regarding the attachment files stored in the attachment file file-system directory are extracted and the hub document is prepared based on the entity declarations regarding the attachment files and the entity declarations regarding the structured documents.

58. (PREVIOUSLY PRESENTED) A hub document preparation apparatus as claimed in claim 56, wherein, in addition to the original document file-system directory and the structured document file-system directory, an attachment file file-system directory for storing attachment files attached to the non-structured documents and an entity declaration file-system directory for storing entity declarations regarding the attachment files are set in advance, and, upon preparation or editing of any of the plurality of non-structured documents to be included in the hub document format structured document, if an attachment file is attached to the non-structured document, then the attachment file is stored into the attachment file file-system directory and an entity declaration for referring to an entity of the attachment file is prepared and stored into the attachment file file-system directory, and then the entity declarations regarding the attachment files stored in the entity declaration file-system directory are extracted and the hub document is prepared based on the entity declarations regarding the attachment files and the entity declarations regarding the structured documents.

59. (PREVIOUSLY PRESENTED) A hub document preparation apparatus as claimed in claim 56, wherein the entity declarations of the structured documents have file names corresponding to file names of the original non-structured documents individually corresponding to the structured documents.

60. (PREVIOUSLY PRESENTED) A hub document preparation apparatus as claimed in

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claim 56, wherein the entity declarations regarding the attachment files stored in the entity declaration file-system directory have file names corresponding to file names of the non-structured documents to which the attachment files are attached.

61. (PREVIOUSLY PRESENTED) A hub document preparation apparatus as claimed in claim 56, wherein the attachment files are graphic files each of which includes graphic information.

62. (PREVIOUSLY PRESENTED) A hub document preparation apparatus as claimed in claim 56, wherein the structured documents are Standard Generalized Markup Language documents whose document structure is defined by a Document Type Definition.

63. (CURRENTLY AMENDED) A hub document preparation method, comprising:  
manually placing a plurality of unstructured document files in one pre-determined file-system directory;

when preparing the hub document, automatically responding to the presence of the plurality of unstructured document files in the one pre-determined file-system directory by converting the plurality of unstructured document files to a corresponding plurality of structured document files, where structure of the plurality of structured documents is given by markup tags included therein;

determining whether each of the plurality of structured document files is present in a structured document file-system directory;

determining structured documents to be referenced in the hub document by automatically acquiring a list of file names of the respective structured document files in the pre-determined file-system directory, preparing corresponding entity declarations, and adding same to the hub document, where except for the presence of each of the plurality of structured documents in the one pre-determined file-system directory, they each of the plurality of structured documents would not be referenced in the hub document and where the presence of each of the plurality of structured documents in the pre-determined file-system is what determines that they each of the plurality of structured documents are to be referenced in the document directory; and

preparing the hub-document by, in response to the presence of each of the stored plurality of structured document files in the structured document file-system directory, automatically adding the entity declarations to the hub document.

### REASONS FOR ALLOWANCE

1. Claims 1-63 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:

In interpreting the claims in light of the specification and applicant's arguments, the Examiner finds the claimed invention is patentably distinct from the prior art of record.

The prior art of record includes Hsu et al. (Hsu), US Patent No. 6,377,956, World Wide Web Consortium, XML Schema Part I: Structures, W3C Working Draft (May 6, 1999), and Sato et al. (Sato), US Patent No. 6,014,680.

Hsu discloses a component document retriever for storing the component document in various subdirectories of a machine-specific directory, and in the media preparation process, all source documents are processed and converted into standard formats such as SGML which are stored in the document database.

Sato discloses a system comprises a hard disk 2 including a non-structured document repository (original document file-system directory) for storing non-structured document and a structured repository (structured document file-system directory) for storing generated structured document. Sato discloses the system also comprises an input/display device for receiving from a user a non-structured document, which is then stored in the non-structured document repository, and convert a non-structured document stored in the non-structured document repository into a structured document and store the generated structured document in the structured document repository.

XML Schema Part I discloses external parsed entities, "a feature of XML that offers a method for including well-formed XML document fragments, including text and markup, by direct reference to the storage object of the parsed entity." Further, XML Schema Part 1 depicts entity declarations containing the names of structured documents.

Claim 1 is allowed because the prior art of record does not expressly disclose alone or in combination the step of determining whether each of the plurality of structured documents is present in the structured document file-system directory, and in response to the presence of each of the plurality of structured documents in the structured document file-system directory, automatically adding the entity declarations to the hub document by acquiring document names of each of the plurality of structured documents stored in the structured document file-system directory and preparing corresponding entity declarations referring to each of the plurality of structured documents stored in the structured document file-system directory.

3. Claims 2-55 further limit independent claim 1. Claims 56-63 are considered allowable for the same reason set forth for claims 1-55.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau Nguyen whose telephone number is (571) 272-4092. The Examiner can normally be reached on Monday-Friday from 8:30 am to 5:30 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Heather Herndon, can be reached at (571) 272-4136.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. On July 15, 2005, the Central Facsimile (FAX) Number will change from 703-872-9306 to 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chau Nguyen  
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